



International Conference
Successful Educational Experiences and Didactic Guidelines in Science Teaching

23 - 24 October 2014

Department of Chemistry and Industrial Chemistry - Genoa - ITALY



Successful Experiences in Chemistry Teaching in Europe: the Transnational Report

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Lifelong
Learning
Programme

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The **Chemistry Is All Around Network** project aims at stimulating the interest of students towards the study of chemistry. It is a three year project, based on the collaboration of school teachers, scientific experts and university researchers. Each year foresees different activities within a specific area of interest:

- 1. students' motivation;**
- 2. teachers' training;**
- 3. successful experiences and good practices.**

13 Partners from 11 European Countries cooperated for three years to reach the project aims



Timetable and documents

The first year of work, dedicated to analyse **students' motivation** to study chemistry in the countries involved and to discuss about tangible solutions, was completed in December 2012.

The second year of work, completed in December 2013, was dedicated to analyse the **training of teachers** in the different countries, with a special focus on science/chemistry teachers.

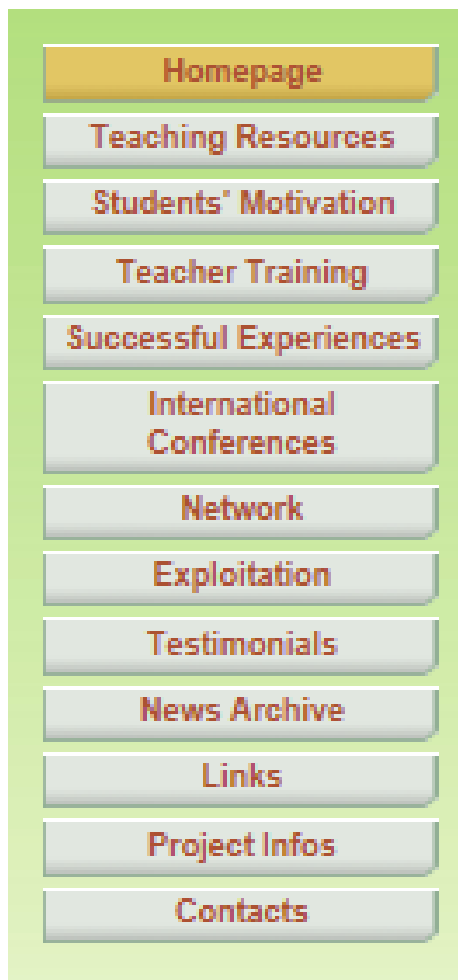
The material produced (relevant documents, papers, reports) is available on the project portal <http://www.chemistryisnetwork.eu>



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Timetable and documents



The third year, concluding with this Conference, was dedicated to identify **successful experiences** and good practices that can be helpful to improve the teaching of chemistry/science, since the early years of school.

Finally, a special section, developed during the full project, is dedicated to **ICT teaching resources**, carefully selected and tested by partners.

The material produced (relevant documents, papers, reports) is available on the project portal <http://www.chemistryisnetwork.eu>



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The Transnational Report: Successful Experiences in Chemistry Teaching in Europe

The Transnational Report summarizes all the national reports and is divided into sections, as follows:

1. National sources of successful experiences

2. Examples of successful experiences

3. The impact of the project on successful experiences:

- Sharing successful experiences in a local context: the national workshops
- Setting new successful experiences: testing of ICT teaching resources
- Sharing successful experiences in an international context: the conferences

4. Conclusions



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1. National sources of successful experiences

The paragraph is dedicated to provide few examples of national sources where teachers can find successful experiences in science/chemistry teaching to get inspiration for their work in the classroom. The quoted sources are of different types, but mainly websites, magazines and specific conferences.



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2. Examples of successful experiences

The chapter is dedicated to report few successful experiences selected by project partners because assessed helpful to teach chemistry (or science, if primary school is considered) in a significant way, thus improving the learning and overcoming the several obstacles that pupils find when studying this subject. The identified experiences are in the form of projects, websites (or platforms, portals) providing teaching tools or journal articles describing and assessing practices performed by teachers/researchers.



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3. The impact of the project on successful experiences:

- Sharing successful experiences in a local context: the national workshops

The most important opportunity to meet for teachers and experts is during the annual workshop. In this occasion the attendance is large and the discussion is engaging. The workshop is fundamental part of the project because it allows to:

- share and integrate the work that experts and teachers make for the project
- discuss and compare problems and experiences in order to improve everyone's skills



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3. The impact of the project on successful experiences:

- Sharing successful experiences in a local context: the national workshops

The last workshop, held in May 2013, dealt with teacher training and the general agenda consisted of the following points:

- Presentation of national activities born to support project objectives
- Focus on teachers' and experts' personal successful experiences
- Discussion on teaching resources tested at national level
- Planning of future work



The National Workshops: Partners at work



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3. The impact of the project on successful experiences: Setting new successful experiences: testing of ICT teaching resources

This is the most important innovation of the third year. It was not planned initially as a project activity, but was designed and introduced in order to reinforce the objectives and the project impact on school environment and to enrich the portal with attractive and useful material for teachers.

All partners agreed that it was necessary to test ICT teaching resources in classroom and in a structured way.

So, the teachers involved chose and used some portal resources with their students, then producing reports.



The reports, uploaded on the new portal section called “testing”, contain testimonials and suggestions for educational paths that can be followed and supported by the above tools, tips and considerations from teachers.

Database

This section provides access to innovative resources and materials to teach chemistry. The selected source focus on the exploitation of new technologies and on the valorisation of enquiry based methods.

Search by

Type of product: All typology
 Level of Chemistry knowledge: All level
 Pedagogical Approach: All approach
 Subject Area: All areas
 Target Group Level: All Target Group
 Language of teaching resource: All Languages
 Free text:

Clear All Find it

Found 233 resource

TITLE OF TEACHING RESOURCE	NAME OF AUTHOR(S)	DATE
100cia Química (Chemistry Science)	José Ant ^o Pascual	

National Reports on successful experiences to promote lifelong learning for chemistry

The national reports on chemistry successful experiences to promote lifelong learning for chemistry are now available on the related section of the project portal. The reports presents examples of successful experiences in the partner countries and the results of testing of ICT resources with science teachers.

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3. The impact of the project on successful experiences: Sharing successful experiences in an international context: the conferences



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3. Conclusions

In 2000, the European Union started a process well known as the "Lisbon Strategy": its main characteristic is that for the first time the themes of knowledge are identified as fundamental.

Later, in 2006, the European Parliament and the Council asked the Member States to develop, as part of their educational policies, strategies aimed to grow in young students the eight key competences that may become the basis for further learning and a solid preparation for adult and working life.



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3. Conclusions

In this new panorama, the achievement of scientific literacy and development of key competences of students become one of the main objectives in natural sciences and particularly chemistry training.

This led to the urgent need to change the teaching methodology, using new and more appropriate educational tools and planning, collaborating vertically.

Crucial is the leading role of teachers to introduce the educational content in attractive and understandable way, to involve students as active participants in the educational process, to develop their scientific and innovative thinking and ability for team working.



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Successful Experiences in Chemistry Teaching in Europe

3. Conclusions

It is important to underline the fundamental role of **primary school** that is the pillar of the education.

It is essential that the approach to science, even more chemistry, takes place in the early years of school, when the child is curious and careful observer of everything around him. Looking carefully and trying to explain what nature offers daily, stimulate the mind that, if properly guided, can be arranged to process scientifically each event and any information it receives. At this level, the study of chemistry will no longer be boring, but exciting.



Acknowledgements



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